

NOTES ON THE COMPOSITAE OF NORTHEASTERN
UNITED STATES

IV. SOLIDAGO.

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It has been claimed by Mackenzie (Torreya 28: 95–99. 1928) that the familiar coastal plain species long known as *Solidago stricta* Ait. (Hort. Kew 3: 216. 1789) must properly be called *S. petiolata* Mill. (Gard. Dict. ed. 8. 1768), and that two other Miller names, *S. linearia* and *S. obtusifolia*, which appeared in the 6th edition of the Abridged Gardeners' Dictionary (1771) also apply to the same species. The original descriptions of these three Miller species, as they appeared when the plants were first provided with binomials, are here reproduced.

29. SOLIDAGO (*Petiolata*) caule paniculato, racemis confertis, foliis inferioribus lineari-lanceolatis petiolatis, caulinis sessilibus glabris. *Wound-wort with a paniced stalk, clustered spikes of flowers, the lower leaves linear, spear-shaped on foot-stalks, and those on the stalks smooth, fitting close . . .* The twenty-ninth sort grows naturally at Philadelphia; the lower leaves are smooth, entire, narrow, and spear-shaped; they are three inches and a half long, and half an inch broad, standing on long foot-stalks. The stalks are round, smooth, and rise three feet high; they are garnished with very small smooth leaves which are entire, and fit close to the stalks. The flowers grow in a close panicle at the top of the stalk; they are of a bright yellow colour, and appear in September.

24. SOLIDAGO (*Linearia*) caule paniculato, pedunculis erectis, foliis linearibus glabris integerrimis sessilibus. *Golden-rod with a paniced stalk, erect foot-stalks to the flowers, and smooth, narrow, entire leaves . . .* The twenty-fourth sort sends out strong smooth stalks two feet high, garnished with rough spear-shaped leaves, indented on their edges; the upper part of the stalk divides into many slender branches, which are garnished with very small leaves, and are terminated by recurved racemi of bright yellow flowers.

26. SOLIDAGO (*Obtusifolia*) caule paniculato, racemis sparsis, pedunculis erectis, foliis inferioribus lanceolatis serratis caulinis obtusis integerrimis sessilibus. *Golden-rod with a paniced stalk, the spikes of flowers thinly disposed, the foot-stalks erect, the lower leaves spear-shaped and sawed, but those on the stalks obtuse, entire, fitting close . . .* The twenty-sixth sort hath purplish stalks which rise three feet high, and are closely garnished with rough spear-shaped leaves, slightly sawed on the edges, ending in acute points. The stalks are terminated by erect racemi of flowers, growing in clusters, of a bright yellow colour.

No specimens of *S. obtusifolia* and *S. linearia* are known to be extant, but these names pretty clearly do not apply to the plant

we know as *S. stricta*, which is glabrous throughout, and has a simple, unbranched stem, with the cauline and generally also the basal leaves entire, and the latter elongate and persistent. The two parts of the description of *S. linearia* are conflicting, but even if we assume, as did Mackenzie, that the second part of the description was misplaced and appeared under the twenty-fifth sort instead of the twenty-fourth, the paniculate stem and especially the sessile leaves effectively preclude *S. linearia* from being the same as *S. stricta*. Under *S. obtusifolia* and *S. petiolata* Miller noted (quite in accordance with *S. stricta*) that the cauline leaves were sessile, but the basal ones conspicuously petiolate. His statement that the leaves of *S. linearia* are sessile must therefore be assumed to apply to all of the leaves, or at least all that are present at flowering time.

The case of *S. petiolata* is not quite so clear. Most of the description is indeed suggestive of *S. stricta*. The basal leaves of the latter are commonly oblanceolate or linear-oblanceolate rather than linear-lanceolate and spear-shaped, but that difference may be merely one of description rather than of actuality. The main sticking point comes in Miller's words "caule paniculato" and "panicled stalk." The stem of *S. stricta* is uniformly simple and unbranched, a character which doubtless suggested the specific epithet to Aiton. Furthermore, the only known purportedly authentic specimen of *S. petiolata* is, according to Mackenzie, *S. odora*, a species which is even more difficult to reconcile with Miller's description. It therefore seems to me that the case for identifying *S. petiolata* Mill. with *S. stricta* Ait. is far from proven, and probably in fact incapable of proof, so that Miller's name is better recommitted to the limbo of nomina dubia. In this connection it may also be noted that *S. petiolata* had been in cultivation, according to Mackenzie, for ten years before the name was published. Those who know the laxity of the breeding habits of *Solidago* will realize that ten years is quite sufficient time for the production of hybrids unidentifiable with any of the wild species.

In the Synoptical Flora, Asa Gray treated *Solidago neglecta* T. & G. and *S. uliginosa* Nutt. as closely related species, and further listed *S. neglecta* var. *linoides* (T. & G.) Gray as a slender

form. The latter is now generally conceded to be the same as *S. uniligulata* (DC.) Porter, a name which, for nomenclatural reasons, must supplant *S. neglecta* if the two are considered conspecific. Gray further noted under *S. neglecta* that "Forms with almost entire leaves and strict panicle too nearly approach *S. uliginosa* Nutt., while some with large and serrate leaves are more like *S. arguta*." It is certainly true that some of the more robust forms of the bog plant *S. uniligulata* approach the upland *S. arguta*, but truly intermediate specimens which cannot satisfactorily be referred one way or the other are few. Between *S. uniligulata* and *S. uliginosa* on the other hand, there is no such clear-cut segregation. Both are marsh and bog plants, and their ranges, while not identical, are very similar. The more robust forms of *S. uniligulata* tend to have broader and more sharply toothed leaves than comparable forms of *S. uliginosa*, but both entities are extremely variable in habit, according to the environment.¹ The sole technical character available to separate these plants of such similar general appearance, habitat, and distribution, is that the branches of the inflorescence of *S. uniligulata* tend to be more or less recurved-secund, while those of *S. uliginosa* are straight and not secund. This is ordinarily a good specific character in *Solidago*, and is commonly used as one of the major key divisions, but such species as *S. missouriensis*, *S. mollis*, and *S. stricta* vary from not at all secund to distinctly so. In attempting to separate *S. uliginosa* from *S. uniligulata* I find not only a large proportion of specimens misdetermined by competent botanists, but also many which might about as well be referred one way as the other. The plants are usually large enough so that only one is mounted on a single sheet, but among the smaller specimens it is not unusual to find both types represented in the same collection, as, for example, in *Porter s. n.*, from Mt. Desert Island, Maine, *Gleason & Gleason 298*, from Cecil Bay, Michigan, and *Gleason Jr. 108*, from Grand Manan Island,

¹ Deam has pointed out in the *Flora of Indiana* that the most slender plants (*S. uniligulata* proper) are found near the center of the bog, and the most robust ones (*S. neglecta* proper) at the margin, with all intermediate stages in the intervening area, and Dr. R. T. Clausen tells me that his field observations in western New York are in accordance with those of Deam for Indiana, on this point. These observations, together with the fact that there is no obvious indication of a bimodal curve in the variation of the herbarium specimens, suggest to me that *S. neglecta* and *S. uniligulata* are not worthy of separate recognition.

New Brunswick. Dr. Clausen tells me that in western New York plants of the two inflorescence types grow together, and apparently hybridize freely, with no evident reduction in fertility of the hybrids, so that the separation becomes entirely arbitrary. Dr. L. H. Shinnars also informs me that in southern Wisconsin the two types not only occur together and intergrade freely, but seem to form a single population. I therefore believe that the two species should be united under the older name, *S. uliginosa* Nutt. Since there is some difference in their range-outlines, and it is possible after close study to place most of the herbarium specimens in one group or the other, I am willing to maintain them as varieties.

To further complicate the problem, it seems that the original of *S. uliginosa* Nutt. is not the plant to which the name is now commonly applied, but rather *S. uniligulata*. Nuttall's name was founded on a plant collected by Pickering, which he described in part as having the "panicle very short, made up of small racemes, which are a little secured". A Pickering specimen preserved at the Academy of Natural Sciences of Philadelphia bears Nuttall's label and the asterisk with which he denoted his new species, and matches his description very well. Dr. Pennell tells me that, since Pickering's plants were the property of the Academy rather than of Nuttall, the specimen mentioned should be considered the actual type of the species, rather than merely an isotype. The Pickering plant is without doubt the secund phase which has recently been passing as *S. uniligulata*, and is very well matched by a collection by Bayard Long from New Jersey. It furthermore bears Asa Gray's annotation as *Solidago linoides*, the annotation evidently made prior to his reduction of *S. linoides* to a variety of *S. neglecta*. The only discrepancy is that in the original description Nuttall says the plant came from Massachusetts, while the label, in Nuttall's own hand, indicates that it came from New Jersey. Dr. Pennell tells me that Pickering collected both in New Jersey and in Massachusetts, and that Nuttall probably merely made a slip of the pen in one place or the other, so that the matter is of no great importance. I am therefore at a loss to understand Gray's treatment in the Synoptical Flora, where *S. uliginosa* is described as having a non-secund inflorescence, and in the synonymy of *S. neglecta* var.

linoides is given “*S. uliginosa* Nutt. in Jour. Acad. Philad. vii. 101, in part, but not of his own herb. nor descr.” As has already been noted, the original description called for a plant with the inflorescence “a little secuned”, and matches the apparent type specimen preserved at Philadelphia, a specimen which Gray himself admitted to belong to the entity which has more recently been treated as *S. uniligulata*. I have found no further reference to the supposedly non-secund plant which is presumably in Nuttall’s herbarium under the name *S. uliginosa* and which Gray apparently used to typify the name. Regardless of its possible existence and identity, it can scarcely controvert Nuttall’s description and type; the name *S. uliginosa* in the strict sense must apply to the secund plant which has passed as *S. uniligulata* (DC.) Porter, and not to the non-secund plant to which it has generally been attached.

Since we are considering the secund and non-secund plants to be varieties of one species, it becomes necessary to find a varietal name for the non-secund plants which have previously passed as *S. uliginosa*. This is provided in *S. uliginosa* var. *peracuta* (Fern.) Friesn., based on *S. humilis* var. *peracuta* Fern. (The name was originally proposed at a time when Professor Fernald, unaware of the earlier *S. humilis* Mill., was using the name *S. humilis* Pursh for the plant which has generally passed as *S. uliginosa* Nutt.) I have examined the type at the Gray Herbarium, and find that it is merely an immature specimen which seems quite characteristic of the non-secund plant which has generally passed as *S. uliginosa*. The typical variety of the species may be known as

S. ULIGINOSA Nutt. var. **uliginosa** Cronquist, var. nov., based on *S. uliginosa* Nutt. Journ. Acad. Philad. 7: 101. 1834.

The goldenrods which Asa Gray treated as the single species *S. humilis* Pursh have recently been passing in large part as *S. Randii* (Porter) Britt., *S. racemosa* Greene, and *S. decumbens* Greene. *S. racemosa* has been distinguished from the cordilleran *S. decumbens* by having more numerous (10–30 instead of 4–9) cauline leaves below the inflorescence, the leaves bearing axillary fascicles. *Krotkov 7952* from the Bruce Peninsula, Ontario, determined as *S. racemosa* by Fernald, has only 5 cauline leaves

below the inflorescence as in *S. decumbens*, but has axillary fascicles as in *S. racemosa*. Two of the three specimens at the New York Botanical Garden of *Martin 65*, from the type station of *S. racemosa*, in Virginia, lack the axillary fascicles, and a number of specimens from Maine to Virginia lack the fascicles except for some poorly developed ones at the base of the inflorescence, where they are often present in *S. decumbens*. *Turner 6*, from Fort Saskatchewan, Alberta, resembles *S. decumbens* in its relatively broad, blunt, crenate basal leaves, but has 20 leaves below the inflorescence, and a number of other western specimens have more than 10. Four specimens of *Sheldon, s. n.*, from Chaffee County, Colorado, have 10–15 leaves below the inflorescence, the middle and upper ones with axillary fascicles, and would thus key to *S. racemosa*, which has not previously been considered to extend to the western cordillera. It is true that *S. racemosa* generally has more numerous leaves than *S. decumbens*, and more often has axillary fascicles, but these characters are surely not sufficiently constant to warrant specific recognition. It should be noted that the approach of *S. decumbens* to *S. racemosa* is through *S. decumbens* var. *oreophila* (Rydb.) Fern., which Fernald has shown (RHODORA 38: 202–204. 1936) is only the “lowland” phase of the alpine and subalpine *S. decumbens* sens. strict.

Although *S. decumbens* var. *oreophila* is difficult to differentiate sharply from *S. racemosa*, it is even more closely related to *S. Randii*, and specimens which very probably represent merely the extreme of variation of the one may so closely simulate the other that one is tempted to identify them with it. *Patterson 274*, for example, from Colorado, is in my opinion morphologically more similar to *S. Randii* than to *S. decumbens* var. *oreophila*, but probably represents merely the extreme phase of the latter. Similarly, a number of eastern specimens, especially from the Gaspé area and northern Michigan, seem more nearly like *S. decumbens* var. *oreophila* than either *S. Randii* or *S. racemosa*. The only reasonably constant differences that I have been able to make out between *S. decumbens* var. *oreophila* and *S. Randii* are that the western plants have more rounded basal leaves, with blunter teeth, than do the eastern ones, but intermediates are plentiful.

S. racemosa also passes into *S. Randii*. I am at a loss to separate them by the differences in prominence of the midrib of the leaves and length of the peduncles, which are given in the manuals. These tendencies are so inconstant that I find it difficult to believe that any botanist, after examining an ample suite of specimens, would seriously propose them as specific characters. The specimens with relatively narrow and on the average more numerous leaves than *S. Randii* do seem to constitute an entity of sorts, however, even though the distinction becomes entirely arbitrary. These specimens also tend to have a narrower inflorescence, with fewer heads and longer peduncles than *S. Randii*, but the differences are only in averages. One of the several specimens at New York of *Plantae Exsiccatae Grayanae* 5 (distributed as *S. humilis*, but bearing the Gray Herbarium correction label *S. racemosa*) has broader leaves and more compact inflorescence than the others, and would very probably be placed with *S. Randii* were it not associated with and otherwise so similar to more typical specimens of *S. racemosa*. It should also be noted that the inflorescence of *S. decumbens* var. *oreophila*, as treated by Fernald and others, varies from essentially like that of *S. Randii* to essentially like that of *S. racemosa*.

Unless one is to revert to the philosophy that anything worthy of a name should be called a species, I fail to see how the entities here discussed can be considered of more than subspecific importance. I am thus forced to return to the treatment of Asa Gray and use one name to cover the group. As Professor Fernald has shown (*RHODORA* 10: 88–91. 1908), the name used by Gray, *S. humilis* Pursh, was founded on another species. The oldest available name of those so far mentioned is *S. Randii* (Porter) Britton, but we must also consider the species which Gray treated in the *Synoptical Flora* as *S. confertiflora* DC. Only two years before the publication of the *Synoptical Flora*, he had noted in his survey of the North American *Solidago* (*Proc. Am. Acad.* 17: 191. 1882) that *S. confertiflora* was “probably only another form of *S. humilis*”, and with this opinion I wholeheartedly agree. The more ample inflorescence and smaller heads which were attributed to *S. confertiflora* in the *Synoptical Flora* are seen to be wholly inconstant when a more ample series

of specimens is examined. *S. confertiflora* is, in my opinion, merely the more robust part of the entity which Fernald has recently treated as *S. decumbens* var. *oreophila*. Even *S. confertiflora* DC. is not the oldest available name, however, for it is antedated by *S. confertiflora* Nutt., and is thus illegitimate. Gray listed *S. glutinosa* Nutt. as a synonym of *S. confertiflora* DC.; I have examined an isotype of *S. glutinosa* at Philadelphia, and agree with Gray's identification of it. I am therefore adopting Nuttall's name for the aggregate species under consideration. The majority of the specimens may be identified by means of the following key. No attempt is made to give complete synonymy.

1. Basal leaves tending to be acute or acutish and serrate or crenate-serrate to subentire; east of the cordillera. subsp. *Randii*.
2. Heads large, the involucre mostly 6-8 (or 9) mm. high; plants robust, commonly 3-9 dm. tall, with numerous heads in an often branched terminal thyrse which may become loose and paniculiform; sand dunes along Lake Michigan. var. *Gillmani*.
2. Heads mostly smaller, the involucre commonly 3-6 mm. high (occasionally larger in var. *racemosa*); plants usually smaller, mostly 1-6 dm. tall, but sometimes fully as robust as var. *Gillmani*; general distribution.
3. Leaves narrow, the basal mostly 7-20 times as long as wide, tending to be subentire; inflorescence tending to be relatively loose and subracemiform. var. *racemosa*.
3. Leaves broader, the basal mostly 3-8 times as long as wide, tending to be sharply toothed; inflorescence tending to be relatively compact and thyrseoid. var. *Randii*.
1. Basal leaves tending to be rounded or broadly obtuse and crenate to subentire; cordilleran. subsp. *glutinosa*.
2. Low, alpine or subalpine plants, about 5-15 cm. tall, with very short and compact inflorescence. var. *nana*.
2. Taller plants, growing at lower elevations, mostly 15-50 cm. tall, with more elongate inflorescence. var. *glutinosa*.

SOLIDAGO GLUTINOSA Nutt. subsp. **glutinosa** Cronquist, subsp. nov. *S. glutinosa* Nutt. Trans. Am. Phil. Soc. II. 7: 328. 1841, sens. strict.

SOLIDAGO GLUTINOSA Nutt. subsp. GLUTINOSA Cronquist var. **glutinosa** Cronquist, var. nov. *S. glutinosa* Nutt. Trans. Am. Phil. Soc. II. 7: 328. 1841, sens. strict. *S. multiradiata* Ait. var. *neomexicana* Gray, Proc. Am. Acad. 17: 191. 1822. *S. neomexicana* Woot. & Standl. Contr. U. S. Nat. Herb. 16: 182. 1913. *S. oreophila* Rydb. Mem. N. Y. Bot. Gard. 1: 387. 1900. *S. decumbens* Greene var. *oreophila* Fern. RHODORA 38: 202. 1936.

SOLIDAGO GLUTINOSA Nutt. subsp. GLUTINOSA Cronquist var. **nana** (Gray) Cronquist, comb. nov. *S. humilis* Pursh var. *nana* Gray, Syn. Fl. 1, pt. 2: 148. 1884. *S. decumbens* Greene, Pitt. 3: 161. 1897.

SOLIDAGO GLUTINOSA Nutt. subsp. **Randii** (Porter) Cronquist, comb. nov. *S. Virgaurea* L. var. *Randii* Porter, Bull. Torrey Club **20**: 208. 1893.

SOLIDAGO GLUTINOSA Nutt. subsp. RANDII (Porter) Cronquist var. **Randii** (Porter) Cronquist, comb. nov. *S. Virgaurea* L. var. *Randii* Porter, Bull. Torrey Club **20**: 208. 1893. *S. Virgaurea* L. var. *monticola* Porter, Bull. Torrey Club **20**: 209. 1893.

SOLIDAGO GLUTINOSA Nutt. subsp. RANDII (Porter) Cronquist var. **racemosa** (Greene) Cronquist, comb. nov. *S. racemosa* Greene, Pitt. **3**: 160. 1897.

SOLIDAGO GLUTINOSA Nutt. subsp. RANDII (Porter) Cronquist var. **Gillmani** (Gray) Cronquist, comb. nov. *S. humilis* Pursh var. *Gillmani* Gray, Proc. Am. Acad. **17**: 191. 1882.

The familiar *Solidago speciosa* Nutt. of the eastern states, a tall plant with numerous usually large leaves, the basal and lower cauline ones commonly persistent and often very large, gives way on the western plains to an ecotype which is now commonly treated as var. *rigidiuscula* T. & G., a smaller plant, with narrower leaves, the basal and lower cauline ones scarcely enlarged and mostly soon deciduous. A third form, the var. *pallida* Porter, occurring in the Black Hills and the eastern part of the Rocky Mountains, retains the small size of var. *rigidiuscula*, but has the basal and lower cauline leaves commonly enlarged and persistent, and more strongly petiolate, the leaves often few and not infrequently a little larger than in var. *rigidiuscula*. A fourth phase, occurring in sandy places from Michigan and northern Indiana to Minnesota, has generally escaped recognition, although it was provided with no less than three specific names by Steele. It should be called

SOLIDAGO SPECIOSA Nutt. var. **jejunifolia** (Steele) Cronquist, comb. nov. *S. jejunifolia* Steele, Contr. U. S. Nat. Herb. **16**: 223. 1913. *S. Fisheri* Steele, loc. cit. *S. Chandonnetii* Steele, ibid., p. 222.

The var. *jejunifolia*, as I understand it, is morphologically so similar to the few-leaved forms of var. *pallida* that if their ranges were not disjunct they would probably not be considered taxonomically separable. Dr. L. H. Shinnars tells me, however, that var. *jejunifolia* is more or less strongly sweet-scented in the field, a condition which, so far as I am aware, does not obtain in the other varieties. Furthermore, the inflorescence tends to be

more open than in the other varieties, with fewer heads on longer peduncles, so that the extreme form looks very unlike the other varieties in that respect. It is suggested that var. *jejunifolia* may be derived from plants of var. *rigidiuscula* which invaded sandy habitats of this more northern area during the post-glacial xerothermic period.

In his discussion of the varieties of *Solidago rugosa*, Dr. Fernald speaks of a northern group of varieties which are predominantly of damp habitats, and a southern group, predominantly of drier habitats, the two groups differing in certain reasonably constant morphologic features. This coincidence of morphologic, ecologic, and geographic characteristics would seem to justify the recognition of each of the two groups of varieties as a subspecies.

SOLIDAGO RUGOSA Mill. subsp. **rugosa** Cronquist, subsp. nov. *S. rugosa* Mill. Gard. Dict. Ed. 8. No. 25. 1768.

SOLIDAGO RUGOSA Mill. subsp. RUGOSA Cronquist var. **rugosa** Cronquist, var. nov. *S. rugosa* Mill. Gard. Dict. Ed. 8. No. 25. 1768. *S. altissima* L. var. *rugosa* Torr. Fl. N. Y. 1: 363. 1843. *S. rugosa* Mill. var. *typica* Fern. Rhodora 38: 221. 1936.

SOLIDAGO RUGOSA Mill. subsp. **aspera** (Ait.) Cronquist, stat. nov. *S. aspera* Ait. Hort. Kew. 3: 212. 1789.

SOLIDAGO ULMIFOLIA Muhl. var. **ulmifolia** Cronquist, var. nov. *S. ulmifolia* Muhl. ex Willd. Sp. Pl. 3: 2060. 1803, sens. strict.

SOLIDAGO ULMIFOLIA Muhl. var. **Palmeri** Cronquist, var. nov. A var. *ulmifolia* differt caulibus hirsutis pilis patentibus.—TYPE: *E. J. Palmer 24111*. Shaded sandstone slopes, near top of north side of Magazine Mountain, Logan County, Arkansas, October 14, 1923. Additional specimens: ARKANSAS: *Palmer 29194*, Hot Springs, Garland County; *Palmer 24180* and *29602*, Magazine Mountain, Logan County; *Demaree 8072*, Bonneville, Logan County; *Demaree 11001*, Hot Springs, Hot Springs National Park, Garland County; *Demaree 19876*, Hector, Pope County; *Demaree 20145*, Ola, Perry County; *Demaree 20498* and *20512*, Cedar Glades, Garland County. ALABAMA: *Buckley s. n.*, Oct. 1838; *Biltmore Herbarium 15003*, Avondale, Jefferson County.

This remarkably constant variation is as yet known only from Arkansas and Alabama. All of the Arkansas specimens have the stem hairy to the base, but the two Alabama specimens have the lower portion glabrous, suggesting a transition to var. *ulmifolia*. This hairy-stemmed variety of *S. ulmifolia* has sometimes been confused with *S. rugosa*, from which adequate specimens

are at once distinguished by having the stems arise from a branching caudex, as in other forms of *S. ulmifolia*, instead of from long creeping rhizomes, as in *S. rugosa*. From the form of *S. rugosa* that occurs in its area it is further distinguished by its much thinner and scarcely rugose leaves, and longer softer pubescence, as well as by some less constant or less tangible features of habit.

Solidago yadkinensis (Porter) Small differs from *S. Boottii* Hook. chiefly in its slightly larger and broader heads (involucre mostly 3–4.5 mm. high in *S. Boottii*, 4.5–7 mm. in *S. yadkinensis*; rays mostly 2–5 in *S. Boottii*, 4–8 in *S. yadkinensis*). *S. yadkinensis* was originally described as a variety of *S. Boottii*, an interpretation in which I concur, since the differences are not great and many doubtful specimens exist. Unfortunately, Asa Gray's material of his *S. arguta* var. *caroliniana* seems taxonomically identical with *S. yadkinensis*, and his diagnosis further bears out the identity of the two. It therefore becomes necessary to transfer *S. arguta* var. *caroliniana* to *S. Boottii*.

SOLIDAGO BOOTTII Hook. var. **Boottii** Cronquist, var. nov. *S. Boottii* Hook. Comp. Bot. Mag. **1**: 97. 1835, sens. strict.

SOLIDAGO BOOTTII Hook. var. **caroliniana** (Gray) Cronquist, comb. nov. *S. arguta* Ait. var. *caroliniana* Gray, Syn. Fl. **1**, pt. **2**: 155. 1884.

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SEDUM ROSEA, NOT *S. ROSEUM*.—The boreal Roseroot has long been passing erroneously under the name *Sedum roseum* "(L.)" Scop. but some American botanists seem to have overlooked the very clear discussion of the name by Sprague in Journ. Bot. lxxvii. 126 (1939), his obvious decision at once accepted by Mansfeld in Fedde, Repert. xlvi. 286 (1939) and by Wallace and Wilmott in Bot. Soc. Exch. Cl. Brit. Isl. Rep. xii. 253 (1942).

Briefly the case is this. The generico-specific name *Rosea*, coming from the apothecaries' *Rosea radix* or *Rhodia radix* (because of the fragrance of the bruised root), was formally taken up as of Rivinius in Ruppium, Fl. Jen. 80 (1718) and was used as a definite generic name by Kramer, Tent. Bot. 19 (1744). Linnaeus, Crit. Bot. 41 (1737) and Fl. Lapp. 304 (1737) replaced